



**Calhoun: The NPS Institutional Archive**  
**DSpace Repository**

---

Theses and Dissertations

1. Thesis and Dissertation Collection, all items

---

1970

A comparison of the United States Marine Corps Joint Military Pay System to the United States Department of Agriculture centralized pay system.

Speed, Billy Lee

George Washington University

---

<http://hdl.handle.net/10945/14921>

---

*Downloaded from NPS Archive: Calhoun*



Calhoun is the Naval Postgraduate School's public access digital repository for research materials and institutional publications created by the NPS community. Calhoun is named for Professor of Mathematics Guy K. Calhoun, NPS's first appointed -- and published -- scholarly author.

**Dudley Knox Library / Naval Postgraduate School**  
**411 Dyer Road / 1 University Circle**  
**Monterey, California USA 93943**

<http://www.nps.edu/library>

A COMPARISON OF THE UNITED STATES MARINE  
CORPS JOINT MILITARY PAY SYSTEM TO THE UNITED  
STATES DEPARTMENT OF AGRICULTURE CENTRALIZED  
PAY SYSTEM

by

Billy Lee Speed



A COMPARISON OF THE UNITED STATES MARINE CORPS  
JOINT MILITARY PAY SYSTEM  
TO  
THE UNITED STATES DEPARTMENT OF AGRICULTURE  
CENTRALIZED PAY SYSTEM

by

Billy Lee Speed  
Bachelor of Business Administration  
Eastern New Mexico University, 1964

A Thesis Submitted to the School of Government and  
Business Administration of the George Washington  
University in Partial Fulfillment of the  
Requirements for the Degree of Master  
of Business Administration

April 1, 1970

Thesis Directed By  
Lowell Cyrus Smith, Ph.D.  
Assistant Professor of Business Administration



## CONTENTS

Chapter	Page
I INTRODUCTION.....	1
Statement of Problem.....	2
Method of Presentation.....	2
Scope and Organization of the Study.....	3
II MARINE CORPS MANUAL PAY SYSTEM.....	6
Basic Record.....	6
Source Data.....	7
Payment to Members.....	8
Mechanization.....	10
Weakness of the Present System.....	10
III JOINT UNIFORM MILITARY PAY SYSTEM.....	13
Basic Objectives.....	14
Policies of the New System.....	15
Basic Principles.....	17
Implementation Date.....	19
IV INPUT AND CENTRAL PROCESSING OF THE MARINE CORPS SYSTEM.....	21
Source Data.....	21
Input Devices.....	24
Communication.....	26
Centralized Processing.....	26
V PRODUCTS OF THE MARINE CORPS SYSTEM.....	28
Products for the Marine.....	28
Products for Management.....	30
VI BENEFITS AND LIMITATIONS OF THE MARINE CORPS SYSTEM.....	32
Benefits of the New System.....	32
Limitations of a Centralized System.....	35



Chapter	Page
VII DEPARTMENT OF AGRICULTURE DECENTRALIZED PAY SYSTEM.....	37
Source Data.....	38
Payments to Members.....	39
Mechanization.....	39
Weakness of the Decentralized System.....	40
VIII CENTRALIZED AGRICULTURE PAY SYSTEM.....	42
Objectives of the Centralized System.....	44
System Design.....	45
Implementation.....	47
IX INPUT AND CENTRAL PROCESSING OF THE AGRICULTURAL SYSTEM.....	48
Source Data.....	48
Central Processing.....	49
X PRODUCTS OF THE AGRICULTURE SYSTEM.....	52
Products for the Individual.....	52
Products for Management.....	53
XI BENEFITS AND LIMITATIONS OF THE AGRICULTURE SYSTEM.....	56
Benefits.....	56
Limitations.....	59
XII CONCLUSIONS.....	61
Similar Characteristics.....	61
Dissimilar Characteristics.....	64
SOURCES CONSULTED.....	69





## CHAPTER I

### INTRODUCTION

During the last decade there have been dramatic developments in computer technology which have revolutionized managerial thinking. These innovations and new developments have challenged the ingenuity and imagination of officials in the federal agencies.

The computer can manipulate, analyze and organize data. It is able to present information which was previously unavailable. Acting as a catalyst for change, the computer has dramatically altered the rules of what is possible and practical. Therefore, it becomes apparent that computerized data processing is a broader and deeper problem than the simple one of installing a computer.

In most federal agencies the cost of personnel represents a sizeable amount of the budget. Since pay is a key factor to both management and the individual, effective, accurate, and timely management of this function is of paramount importance.



### Statement of Problem

Until recently, the federal agencies relied almost entirely on manual processing and record keeping of individual pay accounts despite tremendous scientific and technological developments in computers. The conversion of decentralized manual pay and personnel accounting systems to a centralized system has become an increasing trend in the federal agencies. The Department of Agriculture and the United States Marine Corps are two examples of a departure from the decentralized manual concept of pay and personnel accounting to a centralized mechanized approach. These two systems were developed independent of one another and according to the needs of the respective agency. The question that emerges is, "What are the major similar and dissimilar characteristics of the Joint Uniform Military Pay System as proposed by the United States Marine Corps and the centralized payroll system of the Department of Agriculture?"

### Method of Presentation

In arriving at an answer, it is convenient to compare the developemnt of two separate systems. In the expansion of the research question, there are several subsidiary questions which must be considered. They are:

1. Why was each system implemented?
2. How was each system developed?
3. What are the mechanics of data input and central



processing for each system?

4. What are the products of each system?
5. What are the benefits and limitations of each system?
6. What conclusions can be drawn from this comparison?

#### Scope and Organization of the Study

This study will be limited to the comparison of the development of the Joint Uniform Military Pay System of the United States Marine Corps and the Payroll Automation of the United States Department of Agriculture.

Information used in this study consists primarily of a number of staff studies, reports, directives, memoranda, pamphlets and other documents which originated in the Department of Agriculture and the Department of Defense. Personal interviews with representatives of the two agencies were of great assistance in the development of this study. A final source from which the writer will draw information is his background in accounting and past experience in the disbursing field.

This paper will be presented in twelve chapters, with the intent that each chapter can adequately demonstrate its own theme in the complete comparison of the two pay systems.

Chapter I includes the introduction, with the statement of the problem, the method of presentation, scope and



organization of the problem and a brief summary of the succeeding chapters.

Chapter II is a discussion of the legislative requirements that resulted in the change of the manual system of pay in the United States Marine Corps. A summary of the manual system will be presented to illustrate the contrast of the mechanized system which is to replace it.

Chapter III provides the basic objectives and policies of the Joint Uniform Military Pay System in the United States Marine Corps and how it is to be accomplished.

Chapter IV is concerned with the mechanics of data input and central processing of the United States Marine Corps System.

Chapter V provides the anticipated products of the Joint Uniform Military Pay System as proposed by the United States Marine Corps.

Chapter VI discusses the benefits and limitations of the system in the United States Marine Corps.

Chapter VII is a discussion of the manual system that existed in the Department of Agriculture and the legislative and executive action that required a change.

Chapter VIII will indicate the basic objectives of the automated system of payroll in the Department of Agriculture and how it was implemented.

Chapter IX will discuss the source data automation





and the central processing of the Agriculture system.

Chapter X will discuss the products of the automated agriculture system.

Chapter XI points out the benefits and limitations of the centralized system of the Agriculture Department.

Chapter XII will provide a summary and the author's conclusions as a result of this study.

Since the Joint Uniform Military Pay System and the Automated Payroll System of the Department of Agriculture were developed independently of each other, different approaches were taken in solving a similar problem. By comparing the development and implementation of each, it is hoped that the advantages and disadvantages will emerge. Experience and knowledge gained from these pioneer systems could be of value to other federal agencies considering implementation of an integrated pay and personnel accounting system.



## CHAPTER II

### MARINE CORPS MANUAL PAY SYSTEM

#### Basic Record

The current pay system was adopted by the Marine Corps on July 1, 1948.<sup>1</sup> It was a conversion of the payments from a voucher system to an individual pay record. Disbursing officers maintain a military pay record for each Marine. These military pay records are maintained in the nearest disbursing office which is usually in the same location as the command being supported. Upon transfer from an organization or extended duty at another command, each Marine normally hand-carries his own pay record to his new duty station where it will be given to the local disbursing officer.

The military pay record is designed to contain a six month history of entitlements, deductions and payments and is balanced and closed as of 30 June and 31 December each year. The continuing data is transferred to the new pay record. The closed and balanced pay records are forwarded to Headquarters Marine Corps for processing and filing.

The semi-annual military pay record close-out at the

---

<sup>1</sup>U.S., Department of Defense, Management of Military Personnel, Marine Corps Appropriation, (Washington D.C., December 1961), p.III-7.



local level, which is a long and laborious ordeal, causes peak work loads. During this period the service to the individual is reduced and the accomplishment of daily routine work is virtually stopped in the effort to complete the transition between old and new pay records.<sup>2</sup> The morale of the individuals is affected by such a routine, as this reoccurring problem comes in the prime vacation periods of December and June. Services are measurably reduced for approximately four months of the year due to the close-out process.<sup>3</sup>

#### Source Data

The primary source of input into the system is the data that is provided to the disbursing officer by the commanding officer of the individual concerned. This data is transmitted into three basic modes: the unit diaries, military pay orders, and special standard forms which are required for specific purposes.<sup>4</sup>

The disbursing officer reviews these three modes of data for propriety and enters the relevant data on the individual military pay records. When new data is entered, the pay then has to be recomputed.

---

<sup>2</sup>D.C. Hendricks, Office of Disbursing Branch, Headquarters Marine Corps, Washington, D.C., personal interview, December 8, 1969.

<sup>3</sup>D.J. Thomas, Office of Disbursing Branch, Headquarters Marine Corps, Washington, D.C., personal interview, December 8, 1969.

<sup>4</sup>Ibid.



While the commanding officer of the individual is the primary source of data, there are some transactions, that are transmitted directly to the disbursing officer, which may originate from other activities that effect pay and allowances. Examples of such transactions would be monthly flight certificates, assignment to and termination of government quarters.

#### Payment to Members

The local disbursing officer prepares cash and check payments for the routine semi-monthly pay days. This is accomplished by preparation of a money list, which is broken down into an officer and enlisted grouping, for each organization. The name of each Marine and the amount due is printed on the money list. When the individual receives cash, he must affix his signature opposite his name and amount received. In the case of check payment, the number of the United States Treasury Check is printed on the line opposite the name and amount.<sup>5</sup>

Payments made to an individual are posted on his pay record. These payments are verified on the pay record and the money list. This is accomplished by manually running tapes on pay records, payment postings and money lists.

Partial payments are made to individuals when requested and approved locally. An attempt is made to keep this to a minimum, however, there are numerous cases in which it is

---

<sup>5</sup>R.L. Turner, Disbursing Branch, Headquarters Marine Corps, Washington, D.C., personal interview, December 8, 1969.





in the best interest of the individual and the organization.

Casual payments are made when members are absent from the permanent duty station. When a casual payment is made, the paying disbursing officer posts the payment onto the individual's pay record, or he forwards a pay record adjustment to the disbursing officer holding the pay record of the individual receiving payment. Casual payments made without pay records require an acknowledgement of posting from the disbursing officer maintaining the individual's pay record.

Advanced payments are locally made to individuals who request it and have a permanent change of station orders. Recoupment of the advanced pay is accomplished by installments over a six month period.

All allotments of pay are maintained, accounted for, and paid centrally at the Headquarters Marine Corps. There were 530,226 active duty allotments in effect as of May 1968.<sup>6</sup> Allotments are initiated at the local level by the member, recorded as a deduction on his pay record and forwarded by mail to the central location for processing. During examination of closed pay records at the central level, the amounts deducted on the pay records are compared to the actual amount paid in the form of allotments. Even though much effort is expended in an attempt to eliminate these dis-

---

<sup>6</sup>J.F. Wright, "Marine Corps Plan for Implementation of the Joint Uniform Military Pay System," ( formal presentation: JUMPS Management Review, Pentagon, Washington, D.C., June 19, 1969). p.14.



crepancies, there still exists the human error factor.<sup>7</sup>

### Mechanization

The present system is basically manually operated on the local level, except at a few large installations which maintain several thousand accounts. Regardless of the size of the installation, all entries on the pay records are accomplished by a typewriter, ball point pen, or, in a few exceptions, a bookkeeping machine which posts payments. All computations are performed with the use of a calculator or mentally by the disbursing clerk.

The only significant mechanization consists of printing checks, money lists and check distribution lists at the larger installations. This is accomplished by the use of a master deck of cards which contains the name, serial number, distribution code, and amount due for each individual. The master deck is up-dated by replacing those cards in which the data has changed. The actual calculation of the amount due and the maintenance of the pay records remains a manual function.<sup>8</sup>

### Weakness of the Present System

The second Hoover Commission recommended the conversion

---

<sup>7</sup>D.C. Hendricks, Office of Disbursing Branch, Headquarters Marine Corps, Washington, D.C., personal interview, December 8, 1969.

<sup>8</sup>D.J. Thomas, Office of Disbursing Branch, Headquarters Marine Corps, Washington, D.C., personal interview, December 8, 1969.



of agencies' personnel accounting system to an accrual system.<sup>9</sup> This recommendation was enacted into public law with the passage of the Budget and Accounting Act of 1956.<sup>10</sup> This act was passed primarily to strengthen and improve accounting and budgeting methods in the federal agencies. The act required all federal agencies to convert to an accrual system as soon as possible. Under this concept, obligations for pay and other personnel oriented costs must be determined in the month incurred.

Although the Budget and Accounting Act of 1956 stated implementation should be as soon as possible, there was no follow up on the matter until a joint study was made by representatives of the Bureau of the Budget, General Accounting Office, United States Marine Corps, and Office of the Assistant Secretary of Defense (Comptroller) in 1961.<sup>11</sup>

In essence, the study revealed that the present manual accounting system of personnel accounting and reporting and fiscal accounting and reporting does not furnish actual performance data in a timely manner so as to be used in establishing current month's obligations. In the United

---

<sup>9</sup>U.S. Government, Commission of Organization of Executive Branch of the Government, Budget and Accounting, Washington, D.C., 1955, p.15.

<sup>10</sup>U.S. Public Law 863, 84th Congress, 2nd Session, The Budget and Accounting Procedures Act of 1956.

<sup>11</sup>U.S., Department of Defense, Management of Military Personnel, Marine Corps Appropriation, (Washington, D.C., December 1961), p.I-1.



States Marine Corps obligations are established by estimates at the Headquarters level. The true status of the personnel appropriation is not known until the end of the third year of availability, because of the liquidations and adjustments that have to be processed. Since actual expenditures lag considerably behind obligations, the need for adjustments in the estimate formulas may not be apparent until the close of the operational fiscal year. The study group stated that better financial data should be available in order to permit timely and detailed evaluations of the status of the military personnel appropriations.<sup>12</sup>

<sup>12</sup>Ibid., p. II-1.





## CHAPTER III

### JOINT UNIFORM MILITARY PAY SYSTEM

There were three fundamental reasons why the Joint Uniform Military Pay System was undertaken by the Department of Defense.<sup>1</sup>

1. There was the requirement of an accrual accounting system for personnel accounting as set forth in the Budget and Accounting Act of 1956.<sup>2</sup>

2. There was the need for detailed, current and accurate obligation and expenditure data so as to affect proper management of the military personnel appropriation. This problem was brought to the surface by the several occasions in recent years in which the Army and Air Force over-obligated their military personnel appropriations.<sup>3</sup>

3. The finding of a General Accounting Office study conducted over a five year period revealed the need for better methods in which to control military pay. This study

---

<sup>1</sup>J.M. Throckmorton, "Origin of JUMPS-Program Status Overview," presentation, Pentagon, Washington, D.C., June 19, 1969, pp.2-7.

<sup>2</sup>U.S. Public Law 863, 84th Congress, 2nd Session, The Budget and Accounting Procedures Act of 1956.

<sup>3</sup>Clyde E. Gartley and Lcdr. Frank S. Jacobs USN, "A Mechanized Military Pay System," The Armed Forces Comptroller, January 1968, p.26.



reported the detection of about 1,250,000 over-payments which represented \$100,000,000 and 500,000 under-payments which totaled \$22,000,000.<sup>4</sup>

### Basic Objectives

The Department of Defense created the Joint Uniform Military Pay System with the following basic objectives:

- A. This program has as its primary goal the application of the best and most efficient management and operating techniques in a military pay system based on (1) adequate service to members; (2) maximum practicable uniformity between the military departments; (3) centralized and computerized pay account maintenance; and (4) optimum support of the planning, programming, and budgeting systems by producing and making effective use of comprehensive, accurate, and timely accounting reports and other end products. Related goals are (1) to eliminate or reduce erroneous or illegal payments and (2) to produce from the pay data bank, data and reports now available only through special statistical and reporting methods outside of the pay system.
- B. Initial operation of the Joint Uniform Military Pay System is the first major step of a long-range, evolving program for continuous improvement of the military pay system. This program is oriented toward continuous increases in efficiency and effectiveness, better interface with personnel and other related systems, greater precision in payment and collection actions and related accounting and reporting, and more effective support to military personnel appropriation and resource management systems.<sup>5</sup>

---

<sup>4</sup>Comptroller General of the United States, "Review of Causes of Overpayments of Military Pay and Allowances, Department of Defense," Congressional report, April 16, 1963, pp.2-4.

<sup>5</sup>U.S., Department of Defense, Program for the Development, Test, Evaluation, and Installation of the Joint Uniform Military Pay System, Department of Defense Directive 7330.3 of November 4, 1966, pp.1-2.



### Policies of the New System

In order to accomplish these objectives, the Department of Defense established policies concerning the development, testing, evaluation, installation and maintenance of the program. In essence, the policies set forth were as follows:

1. Each military service will select and operate from its own site a centralized finance center. Each active duty member will be assigned a master military pay account which will be included in a centralized master pay account file for that service. Each service will be required to obtain approval for its system from the Assistant Secretary of Defense (Comptroller).
2. Electronic data processing equipment and techniques will be required for the maintenance of the master military pay accounts. The capability of the equipment selected is required to support present strength levels and to include the capacity to expand operations so as to allow for maximum planned mobilization strengths.
3. Electronic data processing equipment that will be utilized for the military pay system and other tasks is to be scheduled so as to provide continuity in the military pay function. Contingencies to avoid compromising of effective pay functions are required.
4. In addition to the centralized finance center for each service, the present disbursing capability at the



base and installation level will be retained. Therefore, payments could be made at the local level.

5. Input into the system will include information that affects that member's military pay. This information will enter the system at the base or installation level by machine-sensible media which will be as close to the source as practicable.

6. Electronic communications methods will be required to transmit appropriate data between the finance center and the base or installation. Although the primary means of communications is by electronic modes, the system is also required to have a capability of being operated by mail.

7. In order to maintain uniformity throughout the Department of Defense and to facilitate cross disbursing among various services, the data elements and related features are to be standardized for all services.

8. Payments to members of other services will be accomplished by utilizing identical forms and procedures. Therefore, reporting of payments to the parent service may be accomplished in a routine manner.

9. In the event of destruction of the centralized site, alternate methods of payments are required. Therefore, the new system must have this capability before implementation.

10. Each service is required to develop forecast costs for the new system and to compare this figure with the





cost of operating and maintaining the current service system.

11. The reason for implementing the system is to significantly improve the current accounting, budgeting and statistical data recording, collection, analysis and use in the Department. Therefore, the system is not to be developed solely as a system for the payment of personnel from a centralized site by electronic data processing techniques. As the new system provides data that was previously produced by traditional methods and reports, it will facilitate the discontinuance of the manual methods.

12. The objective of the new system is to reduce the detailed work at the base or installation level. The centralized system will provide for maximum production and feedback of data for all levels. This will reduce or prevent the proliferation of special accounting or statistical reports which are required for other management needs, because this information would be a product of the new pay system.<sup>6</sup>

### Basic Principles

In order to further amplify and supplement the Joint Uniform Military Pay System basic objectives and policies, the following basic principles were set forth as a guide for each military service.

---

<sup>6</sup>U.S., Department of Defense, Program for the Development, Test, Evaluation, and Installation of the Joint Uniform Military Pay System, Department of Defense Directive 7330.3 of November 4, 1966, pp. 3-4.



1. Individual members of the military services will be paid on regularly scheduled paydays for two pay periods each month. The pay periods will end as of the 15th and last day of each month.
2. Balances due and unpaid because of member election, special location, or duty circumstances, will be carried forward on a net basis (after deduction/collections) in the accounts.
3. Time between cut-off of input processing for a pay period and date of payment to individual members must be long enough for accurate preparations of the payroll, including application of suitable control procedures and the correction and adjustment of errors. Payday will normally be concurrent with the end of the pay period, except for exigencies under local commanders' cognizance.
4. Payroll payments will be made by check unless there are obvious benefits in cash payments.
5. Leave accounting and payroll accounting are integrated in the payroll system; both are to be properly interfaced with personnel and other related input systems.
6. Individual leave and earnings statements are to be issued each month.
7. Indebtedness to the U.S. resulting from erroneous payments, tax liability and similar items may be collected from members by pay deductions.
8. Members' status having an immediate or potential effect on pay computations will be kept current in individual master military pay accounts. Status data will be a principal factor in computing entitlements and deductions by computer programming.
9. All military services will use the same forms and procedures to pay members of other military services and to report such payments to the parent service.
10. A major system development goal is to reduce manual and clerical effort in operational military units and organizations, by the performance of detailed processing, computations, and record production at the centralized pay operation. To the maximum extent, centralized processing will be based on input of



raw data reflecting member status changes from the level originating such changes.

11. Data required to compute pay and report actual obligations to the Military Personnel Appropriation (MPA) manager will be derived from the master military pay accounts. In addition, actual obligations data will be adjusted to add standard expense not included in military pay computations (see DODI 7220.15, June 1, 1966, "Budgeting and Accounting for the Cost of Military Personnel Service.") Reports of such adjusted actual military pay cost will be summarized in the various arrays and aggregations required at each management level and provided to management.
12. Source Data Automation Techniques will be developed and applied to the maximum practicable extent.
13. COBOL will be used as the primary programming language for problem-oriented programs, and wherever possible and practical for interface with communication programs, supervisory programs and utility software routines.<sup>7</sup>

#### Implementation Date

The target date for implementation and full operation of the system by the military services was July 1, 1969.<sup>8</sup> This date was later revised due to the change in priorities in the implementation of other mechanized systems in the Department of Defense, and in the feasibility study of the Hubbell pay system.

The current target date has been set for July 1, 1971. The Fiscal Director of the Marine Corps stated that this date is more realistic and would permit a longer period

---

<sup>7</sup>U.S., Department of Defense, Requirements for Developments, Test, Evaluation, and Installation of the Joint Uniform Military Pay System, Department of Defense Instruction 7330.4 of November 7, 1966, (Encl.1) pp.5-6.

<sup>8</sup>J.M. Throckmorton, Office of Secretary of Defense, (Project Officer JUMPS) Washington, D.C., personal interview, October 2, 1969.



for purification of the data base. Parallel tests and comparison also could be made with the current pay system, prior to July 1, 1971.<sup>9</sup>

<sup>9</sup>J.F. Wright, "Marine Corps Plan for Implementation of the Joint Uniform Military Pay System," (Formal Presentation: JUMPS Management Review, Pentagon, Washington, D.C., June 19, 1969,) p.14.





## CHAPTER IV

### INPUT AND CENTRAL PROCESSING OF THE MARINE CORPS SYSTEM

#### Source Data

The Marine Corps sytem will be an integrated personnel and pay system which includes both the Joint Uniform Military System and Manpower Management System. The primary source of input is the unit diary which is submitted by the commanding officer to report changes that affect personnel and pay.<sup>1</sup>

Unit diary entries and military pay orders affecting a member's pay are based upon three categories of entitlements, which consist of basic, incremental, and special non-routine.<sup>2</sup>

The three categories of accrued entitlements are as follows:

#### A. Basic entitlements

1. Basic Pay
2. Basic Allowance for Quarters

---

<sup>1</sup>N.E. Wynatt, Marine Corps Finance Center, (Project Officer JUMPS), Kansas City, Missouri, interview, September 25, 1969.

<sup>2</sup>R.L. Tracey, Marine Corps Finance Center, (Assistant Project Officer JUMPS), Kansas City, Missouri, interview, December 8, 1969.



3. Subsistence (Basic Allowance for Subsistence)
4. Station Allowances Overseas
5. Uniform Allowances
6. Clothing Allowances (except Initial Clothing Allowance for enlisted personnel)
7. Family Separation Allowances
8. Separation from Service Payments
9. Social Security Tax- Employer's Contribution (FICA)
10. Personal Money Allowances (Officers Pay Grade 0-9 and 0-10.)
11. Subsistence (in kind)
12. Apprehension of Military Deserters, Absentees, and Escaped Military Prisoners.
13. Interest on Uniformed Services Savings Deposits
14. Death Gratuities
15. Servicemen's Group Life Insurance
16. Initial Clothing Allowance for Enlisted Personnel (clothing issued in kind to recruits)
17. Retirement Pay Liability

B. Incremental entitlements

1. Flying Duty - Crew
2. Submarine Duty
3. Flying Duty - non-crew



4. Glider Duty
5. Parachute Jumping Duty
6. High or Low Pressure Chamber Duty
7. Demolition Duty
8. Flight Deck Duty
9. Sea and Foreign Duty
10. Proficiency Pay
11. Hostile Fire Pay
12. Diving Duty Pay

C. Special Non-routine entitlements

1. Reenlistment Entitlement
2. Claim Adjustment
3. Retroactive Promotion
4. Lump-sum Leave Payments
5. Others That May Occur<sup>3</sup>

There will be numerous changes occurring in the field affecting pay and allowances that cannot be reported on the unit diary. Therefore, a special machine scannable form, called a transcript for data extraction, has been devised to facilitate the reporting of this data. The transcript of data extraction will be prepared by the local disbursing officer. The data used in the preparation of this document must be supported by a substantiating voucher. Substantiating vouchers are prepared by the individual's commanding officer, housing officer, supply officer, or by the disbursing officer.

---

<sup>3</sup>U.S., Department of the Navy, Office of the Comptroller of the Navy (NCFS-3), Criteria and Data Requirements for Reporting Pay and Allowances, February 17, 1967, Enclosure 6, pp.1-2.



Both the unit diary and the transcript of data of extraction will be delivered to one of the eight decentralized locations known as Satellite Data Processing Installations (SPDI). Upon receipt of input data from the field, the satellite installation will machine scan and edit the unit diaries and transcripts of data extraction. Acceptable data will then be transmitted to the Finance Center, Kansas City, Missouri, by Automatic Digital Network (AUTODIN). The central site will acknowledge receipt of acceptable data on a Unit Transaction Register (UTR), which will be transmitted to the applicable satellite data processing installation. The satellite data processing installation will then distribute copies of the unit transaction registers to the local commanding officers and disbursing officer. Unacceptable data will be returned to the originator at the time it is discovered to be erroneous.<sup>4</sup>

#### Input Devices

The system is designed to receive input by the use of optical character readers. The optical character reader is capable of reading typewritten information and automatically translating that information into machine language, thus eliminating the need for key punching and verifying. However, it must be noted that a standard typewriter font must be utilized in the preparation of scannable documents. Typewriters must also be equipped with a one-time use polyethylene typewriter

---

<sup>4</sup>United States Marine Corps, "JUMPS Field Procedures Manual," proposed draft, December 1969, pp.1-2.





ribbon.<sup>5</sup>

The data must be submitted on special forms so that it can be processed through the optical character reader. New forms have been designed to support the system. These forms must be prepared under close supervision and in compliance with specific guidelines.<sup>6</sup>

The following general rules apply to the preparation of all scannable forms:

1. Only USASI font style typewriters may be used.
2. All alpha characters must be in capital letters.
3. Forms may not be folded, stapled, or mutilated in any manner.
4. Forms may not contain erasures.
5. Care must be taken to avoid substituting "I" for "1" and "O" for numeric, "0".
6. Forms may not be reproduced locally.
7. All information must be contained in the proper blocks without touching field separators and may not overflow into other blocks.
8. All forms must be properly vertically aligned.
9. All data must be doubled spaced.
10. All dates must be records in the standard Department of Defense format: Year, Month and Date.<sup>7</sup>

---

<sup>5</sup>Ibid., pp.1-9

<sup>6</sup>R.L. Tracey, Marine Corps Finance Center, (Assistant project officer, JUMPS), Kansas City, Missouri, interview, December 8, 1969.

<sup>7</sup>United States Marine Corps, "JUMPS Field Procedures Manual," proposed draft, December 1969, pp.1-11 - 1-13.



### Communication

The flow of data between the field organizations and the local disbursing officer to the satellite data processing installations will be performed by non-electronic means. The exchange of data between the satellite data processing installations and the central site will be accomplished by electronic means.<sup>8</sup>

Data affecting the master military pay account will be transmitted, via Automatic Digital Network, on a daily basis. The satellite data processing installations will prepare unit payrolls for regular paydays based on information received from the central site.<sup>9</sup>

Stand-by procedures will have been developed for use in the event the electronic transmission facilities become inoperative. These procedures will provide for continued operations by transporting data by mail courier, pouch or similar means.<sup>10</sup>

### Centralized Processing

The concept of the system is based on reporting facts to the central computer and allowing the computer to determine what pay action is necessary. The computer is not instructed

---

<sup>8</sup>Ibid., pp.1-1 - 1-2.

<sup>9</sup>Ibid., pp.1-5 - 1-8.

<sup>10</sup>U.S., Department of Defense, Requirements for Developments, Test, Evaluation, and Installation of the Joint Uniform Military Pay System, Department of Defense Instruction 7330.4 of November 7, 1966, (Encl.1) p.27.



to perform specified pay computations.<sup>11</sup>

The Master Military Pay Account is the heart of the Marine Corps Pay System. Each active duty Marine will have an individual master military pay account which will be maintained in machine-sensible form and media at the centralized site. This record will contain all items of entitlements, deductions and payments. It will also contain period-to-date records for wages earned; taxes withheld; taxable wages paid; bonuses paid and recouped; and leave earned, taken and balance due. The master military pay account will be the basis from which computations of pay are made. This record will be used for information storage and retrieval, production of obligation reports and liquidation of obligations.<sup>12</sup>

Data transmitted from the satellite data processing installations will be edited and posted to the master file. The finance center is responsible for the final examination of reported data which will result in the change or up-date of the master file. However, this does not relieve the commanding officers from insuring that the input data is accurate and reported in a timely manner.<sup>13</sup>

---

<sup>11</sup>Clyde E. Gartley and Frank S. Jacobs, "A Mechanized Military Pay System," The Armed Forces Comptroller, January 26, 1969, p.28.

<sup>12</sup>U.S., Department of Defense, Requirements for Development, Test, Evaluation, and Installation of the Joint Uniform Military Pay System, Department of Defense Instruction 7330.4 of November 7, 1966, (Encl.1) pp.10-12.

<sup>13</sup>United States Marine Corps, "JUMPS Field Procedures Manual," proposed draft, December 1969, pp.1-5 - 1-8.



## CHAPTER V

### PRODUCTS OF THE MARINE CORPS SYSTEM

#### Product for the Marine

All active duty Marines will have a Master Military Pay Account maintained at the central site and at one of the eight Satellite Data Processing Installations which provides support to his parent command. The master military pay account will contain all pertinent data such as, identification, entitlements, deductions, record of payments, taxes withheld year-to-date, miscellaneous collections, leave taken and balance-to-date, full allotment information, etc. The active pay account will include five months' history in addition to the current month's events for processing and inquiry. Historical files over six month old will be maintained for audit and inquiry.<sup>1</sup>

Each Marine on active duty will have a personal financial record which will be maintained in the local disbursing office. This record will be a 9½ by 11¾ inch manila folder containing specified over-printed data for use in recording certain events and transactions affecting a member's pay. This design

---

<sup>1</sup>R.L.Tracey, Marine Corps Finance Center, (Assistant project officer JUMPS), Kansas City, Missouri, interview, December 8, 1969.





provides the capability to manually perform payroll accounting at the local level in case of emergency, as directed by the Commandant of the Marine Corps.

The folder is equipped with two off-setting depressed paper fasteners for the retaining of certain documents which affect the member's pay. Such documents would include leave and earnings statements for the previous six months, copies of active allotments, copies of transcripts of data extractions, copies of travel vouchers, dependent travel records, and miscellaneous informations.<sup>2</sup>

Leave and earning statements will be produced monthly and delivered to the individual Marine. This statement will indicate all factors affecting his pay through the last day of the period for which printed. The leave and earnings statements will contain information in ten eifferent categories for a total of sixty-five different items.<sup>3</sup>

The leave and earnings statement provides the information necessary for regular or special payments to be accomplished on the local level. The local disbursing officer can determine the amount due to the individual by referring to the member's current leave and earnings statement. Local payments, which are recorded on a money list, can be in cash or check. The original money list is forwarded by transmittal to the nearest

---

<sup>2</sup>United States Marine Corps, "JUMPS Field Procedures Manual," proposed draft, December 1969, pp.3-1 - 3-8.

<sup>3</sup>Ibid., pp. 3-23 - 3-33



satellite data processing installation for processing to the central site, so as to up-date the Master Military Pay Account.

Members are permitted to allot all or part of the pay by means of several different types of allotments. Such allotments include support, savings, loans, indebtedness, annuities, insurance, savings bonds, and charity drives. Allotment of pay is accomplished by submitting a completed allotment authorization form to the local disbursing officer. The disbursing officer forwards the document to the nearest satellite data processing installation for scanning and transmission to the central site so as to up-date the master military pay account. Allotment checks are prepared monthly at the central site and mailed to the allottees.<sup>4</sup>

#### Products for Management

The Department of Defense requires that budgeting, accounting and reporting for cost of personnel be handled as an element of operational costs.<sup>5</sup>

Under the centralized concept, this information will be made available to all reporting activities in an accurate and timely manner. Local commands will be able to utilize this information in the preparation and execution of their operational budgets.

The management of the Military Personnel Appropriation will be enhanced by monthly reports from the centralized site.

---

<sup>4</sup>Ibid., pp. 4-1 - 4-12

<sup>5</sup>U.S., Department of Defense, Budgeting and Accounting for The Cost of Military Personnel Services, Department of Defense Instruction 7220.15, June 1, 1966.



These reports will indicate the monthly accrued entitlements for military pay. It will also include the cumulative entitlements for the current year. Disbursements will be reported monthly enabling a comparison of obligations with actual expenditures. These reports provide management an accrual accounting capability for personnel costs. The necessity to rely upon after the fact expenditure reports for correction of estimated obligations is eliminated.<sup>6</sup>

As a result of the integration of pay and personnel in a total system, reports from the central site can be in both strength and dollar figures. Such reports will fulfill both the financial management function and the personnel program management function as required by the Department of Defense. Management will have the capability of instantaneous random selection of information at the central site. This capability will reduce the lag time required to respond to inquiries from the field and higher authority.<sup>7</sup>

<sup>6</sup> J.F. Wright, Marine Corps Plan for Implementation of the Joint Uniform Military Pay System, (Formal presentation: JUMPS Management Review, Pentagon, Washington, D.C., June 19, 1969), p.11.

<sup>7</sup> Ibid., p.12



## CHAPTER VI

### BENEFITS AND LIMITATIONS OF THE MARINE CORPS SYSTEM

Although several years have lapsed since the passage of the Budgeting and Accounting Act of 1956, the system on the horizon appears to satisfy legislative requirements. This might not have been possible without the dramatic developments in computer technology which have taken place in recent years. These developments have revolutionized the military managerial thinking, which has led to devising adaptations of these discoveries in pursuit of finding more efficient, accurate and timely methods in which to execute the military personnel appropriation in the United States Marine Corps.<sup>1</sup>

#### Benefits of the New System

As indicated in the policies, each service was to develop its own system, subject to approval by the Assistant Secretary of Defense (Comptroller). The Marine Corps System is integrated in lieu of being interfaced. Therefore, the need for data exchanges between personnel accounting systems and pay systems

---

<sup>1</sup>J.M. Throckmorton, Office of Secretary of Defense, (Project Officer JUMPS), Washington, D.C., personal interview, October 2, 1969.





to reconcile difference can be omitted. This is accomplished by the integration of Joint Uniform Military Pay System and Manpower Management System at the source and centrally. A single source automation system eliminates many inconsistencies and contradictions in the information that exists in the two isolated vertical systems such as pay and personnel.<sup>2</sup>

The integrated system provides the means for "single" reporting that will fulfill both the financial management and personnel program management function. The one system will be capable of providing both strength and dollar figures in one operation.<sup>3</sup>

Scanning by an optical character reader has been selected as the method of input. This equipment is capable of reading typewritten information and automatically translating that information into machine language, thus eliminating the need for key punching and verifying. Standard forms have been developed which will be typed locally and then processed through scanning equipment, which will be transformed into magnetic tape. This magnetic tape will be edited and then posted to the integrated file. Copies of these same forms will be used as a service record page in the local personnel files. Unit diary entries and transcripts of data extraction which support

---

<sup>2</sup>N.E. Wyant, Marine Corps Finance Center, (Project officer JUMPS), Kansas City, Missouri, interview, September 25, 1969.

<sup>3</sup>J.F. Wright, Marine Corps Plan for Implementation Of the Joint Uniform Military Pay System, (Formal presentation: JUMPS Management Review, Pentagon, Washington, D.C., June 19, 1969), p.11



personnel and pay adjustments will be converted to microfilm. This microfilm will be available and retrievable at the Finance Center. Through the use of a keyboard, examination of entries can be made from a video screen.<sup>4</sup>

More efficient management of the military personnel appropriation can be accomplished because, as payments to personnel are made, as allotments are disbursed, as taxes are remitted, as collections are made, liquidations of obligations are accomplished. The unliquidated obligations will be identified, analyzed and transferred within a clearing account. The actual amount of military appropriation is, therefore, more immediately available for the developing of plans and programs.

The system has the capability of providing instantaneous and random selection of pay and personnel information. The time required to process inquiries on family allotments will be substantially reduced. Continuous balancing of allotments authorized and those being paid can be accomplished under this system.

Changing legislation in military pay and allowances can easily be incorporated by changing the central programs which can then be run against the entire population.<sup>5</sup>

Each Marine will be provided a monthly statement showing the status of his pay account and his leave available. This

---

<sup>4</sup>R.L. Tracey, Marine Corps Finance Center, (Assistant project officer JUMPS), Kansas City, Missouri, interview, December 8, 1969.

<sup>5</sup>J.F. Wright, Marine Corps Plan for Implementation of the Joint Uniform Military Pay System, (Formal presentation: JUMPS Management Review, Pentagon, Washington, D.C., June 19, 1969), pp.11-12.



information should help individual planning and reduce the number of pay inquiries each month.

The elimination of manual intervention and human efforts will provide a more accurate computation of pay. This is expected to lead to the stabilization of each Marine's pay from one pay day to the next.

The errors in settlement of unused leave should be reduced. The integration of leave accounting and payroll accounting will make this possible.<sup>6</sup>

#### Limitations of a Centralized System

Despite lengthy pre-installation studies, it is difficult to envision such a complex system without any shortcomings. Since this system will not be fully implemented until July 1, 1971, it is important to point out some reservations that require examination prior to implementation.

Collection and synthesis of mass quantities of data is only one aspect of budget execution. There still remains the problem of arriving at meaningful conclusions from the data gathered.

Perhaps the largest factor will be, "Can the cost of such a sophisticated and complicated system ever be justified from direct dollar saving?" Estimates have been made based on overpayments under the present system and reduction of personnel, but these estimates do not equal the anticipated cost of the new system. This comparison is also less than useful, because

---

<sup>6</sup>N.E. Wyant, Marine Corps Finance Center, (Project officer JUMPS), Kansas City, Missouri, interview, September 25, 1969.



things done under the new system cannot be done manually, or even if they were mechanized under the old system, they would not be done correctly, because of the two vertical isolated systems of personnel and pay accounting.<sup>7</sup>

Some aspects of service to the members will be enhanced by more accurate computation of pay and the periodic receipt of leave and earnings statements. However, it will be difficult to maintain the present system level of service because of the dislocation of the central master pay account and communication delays between the Finance Center, Kansas City and the field activities. Therefore, the level of personalized and local service to members will be reduced by a centralized system.

Once the new system is implemented there are certain to be difficulties which were not envisioned in the system planning. Therefore, it will be necessary to advise the Marines that they will have to bear with the new system because once committed there can be no turning back without disastrous results.

<sup>7</sup>J.F. Wright, Marine Corps Plan for Implementation of the Joint Uniform Military Pay System, (Formal presentation: JUMPS Management Review, Pentagon, Washington, D.C., June 19, 1969), pp.1-3.





CHAPTER VII  
DEPARTMENT OF AGRICULTURE  
DECENTRALIZED PAY SYSTEM

Prior to July 30, 1961, the payments to personnel in the Department of Agriculture were accomplished on a decentralized basis.<sup>1</sup> Eighteen different agencies and offices of the Department of Agriculture were paid from various locations. In the continental United States there were eighty-seven offices which performed payroll functions. The location of these payroll offices were not evenly distributed throughout the United States, but tended to be concentrated in some areas. For example, eighteen offices were situated in metropolitan Washington, D.C., four offices were located in the San Francisco metropolitan area, and three others in different areas.<sup>2</sup>

This was further complicated by the geographic location of the 130 different personnel offices that provided input and received payroll support from the 87 different payroll offices. The number of personnel paid by the various

---

<sup>1</sup>Boris Robbins, Office of Management Improvement, United States Department of Agriculture, Washington, D.C., personal interview, October 2, 1969.

<sup>2</sup>U.S., Department of Agriculture, Management of Objectives with Dollars through Employees, (Washington, D.C.: U.S. Government Printing Office: 1962). p.107.



offices ranged from 42 to 10,903.<sup>3</sup>

#### Source Data

The primary source of input into the system was the data provided to the pay office by the personnel officer of the individual concerned. This data was transmitted on several special forms which were required for specific purposes.

Such information included social security number; position; rate of pay; amount of deductions for bond, life insurance and health plans; and dependent status for state and federal taxes. Other factors that affected pay included allowance for quarters and variations in pay rates such as a daily, hourly and commission rate. There were seven different types of leave to be considered in computation of payments.<sup>4</sup>

Once this information was received, the amount of the pay check was determined by the time and attendance reports that were submitted for each individual. Under the decentralized concept, the procedures for submitting time and attendance reports varied according to agencies. This information was transmitted on ten different types of reports to the payroll offices.<sup>5</sup>

---

<sup>3</sup>Ibid., pp. 138-140.

<sup>4</sup>U.S., Department of Agriculture, Management of Objectives with Dollars through Employees, (Washington D.C.: U. S. Government Printing Office: 1962), pp. 141-142.

<sup>5</sup>Ibid., p.107.



### Payments to Members

Payment to individuals was accomplished by check, however, there was no uniformity in the method of distribution. The method of distribution varied in that some checks were mailed directly to the individual, others were delivered to a designated agent for further distribution, and in some cases, checks were remailed in order to affect delivery to the individual.

Pay days or periods varied according to several factors. Pay periods for most employees were bi-weekly, however, there were some weekly, semimonthly, monthly and unscheduled payments such as those by special request of the individual.<sup>6</sup>

### Mechanization

Under the decentralized concept there were both simplified and comprehensive payroll systems that were being utilized. Some of the systems were completely manual in all aspects relating to the performance and maintenance of the pay function. Other pay systems were designed to include both manual operations and bookkeeping machines. In certain locations, the payroll operations were accomplished with the use of punched cards and automatic data processing equipment.

Due to the variation of the pay systems of various agencies in the Department of Agriculture, the number of employees serviced by each office differed. Some of the agencies had a centralized pay office that provided support

---

<sup>6</sup>Ibid.



to all of its employees in the United States and foreign countries. Other pay offices were established to provide service to certain geographic areas or regions.<sup>7</sup>

#### Weakness of the Decentralized System

In 1961, the Department of Agriculture expenditure for salaries to its 96,000 employees represented \$500,000,000. Therefore, maximum effective management of this sizable program was necessary for accomplishment of the objectives of the Department of Agriculture. Through effective management of personnel costs, it was concluded that this could be a key to effectiveness of expenditures in other areas of the department.<sup>8</sup>

Due to the large number of separate personnel and pay offices, the information was compiled in a pyramid fashion through the eighteen different agencies to the apex or Department of Agriculture. Therefore, the management of personnel cost was restricted to specific areas. These areas included some national, regional, state, and local operations. Within these various areas, management effectiveness and cost of operations varied. Appraisal of management effectiveness and cost of operations of these different areas and agencies was a difficult task.<sup>9</sup>

---

<sup>7</sup>Ibid.

<sup>8</sup>U.S., Department of Agriculture, MODE, A New Approach to Public Management, (Washington, D.C.: U.S. Government Printing Office, September 1961), p.3

<sup>9</sup>Ibid.





The decentralized pay system did not meet the requirements of the Budget and Accounting Act of 1956. In order to comply with this statute and to affect better management of the funds available to the Department of Agriculture, it would be necessary to design a new pay system.<sup>10</sup>

<sup>10</sup>Boris Robbins, Office of Management Improvement, United States Department of Agriculture, Washington, D.C., personal interview, October 2, 1969.



## CHAPTER VIII

### CENTRALIZED AGRICULTURE PAY SYSTEM

The beginning of a centralized pay system in the Department of Agriculture can be linked to an Agriculture staff meeting which took place on July 31, 1961. The Administrative Assistant Secretary, Joseph M. Robertson, directed key staff members to develop a feasibility study on the application of automatic data processing equipment to administrative support and services common to all agencies and offices of the department. The primary objective was to devise a system that would provide effective management and determine the allocation of financial and human resources in the accomplishment of the programs of the Department of Agriculture.<sup>1</sup>

In order to accomplish this study a task force of thirty-eight employees from various agencies of the Department was established. This task force was then divided into the following six work groups:

1. The system design work group was given the task of designing a system with business applications

---

<sup>1</sup>Boris Robbins, Office of Management Improvement, United States Department of Agriculture, Washington, D.C., personal interview, October 2, 1969.



so as to achieve maximum efficiency in the use of automatic data equipment.

2. The personnel work group was required to determine what personnel documents, statements, and reports were required. It also ascertained the flow of this information so that automatic data processing equipment could be applied to this function.
3. The payroll, accounting and budget work group had the responsibility to determine the flow of documents from the time and attendance clerks to the payroll operations and the subsequent flow of output documents back to the various work areas.
4. The program analysis group worked on means in which to measure effectiveness of money spent for personnel in the agencies of the department. The goal was to show the relative value of accomplishments in the different agencies. This was to be accomplished by various concepts of capturing data.
5. The operations research work group had the job of developing computer programs and explanatory narratives. Projected computer time requirements was the other task of the group.
6. The cost work group developed a cost comparison of the decentralized system and a centralized mechanized system.<sup>2</sup>

---

<sup>2</sup>U.S., Department of Agriculture, Management of Objectives with Dollars through Employees, (Washington, D.C.: U.S. Government Printing Office, 1962), pp. i-iv.



## Objectives of the Centralized System

In order to develop the most economical and efficient system in which to effect payments to personnel, several objectives were considered. The general nature of these objectives were as follows:

1. Insure the utilization of all presently available automatic data processing equipment to the maximum extent possible.
2. When finalized, the system would have to be in keeping with the existing legal requirements and policies set forth by other agencies of government such as the General Accounting Office, Civil Service Commission, Bureau of the Budget, and the Treasury Department.
3. Expeditionous and accurate payment of salaries to individuals was considered to be an absolute must.
4. Capabilities of the system would require that provisions be made so as to provide for an ever increasing and complex payroll process, as a result of future legislation.
5. Provisions should be made so that accounting reports and expenditures for personnel could be produced as a by-product of the payroll process.
6. Provide for an accurate and simplified procedure in which to account and report withholdings of income taxes, social security contributions,





retirement benefits and accrued leave.<sup>3</sup>

### System Design

In order to achieve management of objectives with dollars through employees, it was determined that a complete system for management be required. This conclusion was arrived at after careful study of requirements and Department objectives. Several operating governmental and industrial integrated payroll and fiscal systems were observed, and the experiences of these organizations were also evaluated.

An integrated system was considered to be the best equipped to meet the needs of the Agriculture Department. Under this concept, once data entered the system it would flow to each application area to which it applied. This would facilitate the multi-use and exchange of data from various application areas. The general idea was to be able to increase the quantity and speed of data processed. The end results would be increased accuracy and exception reporting. Because of these results, management control could be affected in a more timely manner.

The total system was designed so as to have five sub-systems, which would integrate five application areas.<sup>4</sup> The five sub-systems were titled, (PADA) Payroll Automation for the Department of Agriculture, (ADAM) Agriculture Department Automated Manpower, (FAME) Financial Analysis of Manage-

---

<sup>3</sup>Ibid., p.107

<sup>4</sup>U.S., Department of Agriculture, MODE, A New Approach to Public Management, (Washington, D.C.: U.S. Government Printing Office: September 1961), pp.7-13.



ment Effectiveness, (MOHR) Management of Human Resources, and (GAME) Gaming Analysis of Management Effectiveness.

The total system includes both business and mathematical programs, which are reflected in the eighteen master files.

The master files are as follows:<sup>5</sup>

<u>TITLE</u>	<u>APPLICATION</u>
Payroll	PADA
Supplemental Payroll	PADA
Report Summary	ADAM
Cumulative Retention Data	ADAM
Position and Job	ADAM
Retirement	ADAM
Budget	FAME
Personnel	MOHR
Personnel History Summary	MOHR
Personnel Changes	MOHR
Job Qualifications and Print Constant	MOHR
Standards	GAME
Math Constants and Constraints	GAME
Funds, Programs, Requirements	GAME
Funds and Programs	GAME
History of Programs Complete	GAME
Accumulated Effectiveness	GAME
New Conditional Job Descriptions	MOHR

---

<sup>5</sup>U.S., Department of Agriculture, Management of Objectives with Dollars through Employees, (Washington, D.C.: U.S. Government Printing Office, 1962), p.3.



## Implementation

In keeping with the Department objective of insuring utilization of presently available equipment, it was discovered that the new system could be operated on the Department's computers which were located in New Orleans, Louisiana. Therefore, a Management Data Service Center was established in New Orleans from which the new system would be implemented.

The conversion process was accomplished in two parts. The establishment of the basic record was completed by assimilating data common to normal operations and processing it on automatic data processing equipment. Additional information in the form of corrections was processed in order to complete the conversion.

The manual records on payroll and personnel were sent to the Management Data Process along with the conversion data. No attempt was made to operate parallel systems once the conversion process was initiated. The conversion process was on an incremental basis of 10,000 per pay period for six months.<sup>6</sup>

<sup>6</sup>U.S., Department of Agriculture, MODE, A New Approach to Public Management, (Washington D.C.: U.S. Government Printing Office, September 1961), pp.33-34.



CHAPTER IX  
INPUT AND CENTRAL PROCESSING OF THE  
AGRICULTURAL SYSTEM

Source Data

The primary source of input into the system is the Time and Attendance Report (SF-1130) that is manually prepared at the various installations. This report is submitted on a bi-weekly basis and reports the hours which each member had worked. Over-time, night differential, leave taken with pay, leave without pay, sick leave and absenteeism are recorded. This form also includes the rate of pay of the individual concerned. The rate of pay is determined by the Federal Government Rating, one through eighteen and the step in grade, one through ten, or by a prescribed hourly rate.<sup>1</sup>

There are twelve other documents which are utilized as input into the system. These documents are prepared and submitted by 130 personnel offices and the 2000 appointing locations as required.<sup>2</sup>

---

<sup>1</sup>Boris Robbins, Office of Management Improvement, United States Department of Agriculture, Washington D.C., personal interview, October 2, 1969.

<sup>2</sup>U.S., Department of Agriculture, Management of Objectives with Dollars through Employees, (Washington, D.C.: U.S. Government Printing Office, 1962), p.143





The control number by which personnel are accounted for is the social security number. In the event an individual does not have a social security number, he is assigned a temporary number. Each individual is also assigned an organizational code which indicates the installation in which he is employed.<sup>3</sup>

Payroll and accounting input documents flow from the various installations to designated collection points. The collection points review and compile the documents for weekly shipment. All shipments of documents are accompanied by transmittals for control purposes. Documents are then forwarded to the Management Data Service Center in New Orleans, Louisiana. Transmittals with errors or incomplete information will be returned to the originator for correction and re-submission.

Upon receipt of input documents, the Management Data Service center codes the data on the documents and then it is key punched on cards. Data from the cards is then recorded on magnetic tape for computer processing.<sup>4</sup>

### Central Processing

The Payroll application is performed on one large

---

<sup>3</sup>Boris Robbins, Office of Management Improvement, United States Department of Agriculture, Washington, D.C., personal interview, October 2, 1969.

<sup>4</sup>U.S., Department of Agriculture, Management of Objectives with Dollars through Employees, (Washington, D.C.: U.S. Government Printing Office, 1962), pp.107-109.



computer which utilizes a business type program. Peripheral operations such as card-to-tape, tape-to-card and tape-to-print are performed on a small computer.<sup>5</sup>

The heart of the system is the master payroll file which was established from existing manual payroll and personnel records. The file is up-dated by input from data contained on several special forms. Notification of Personnel Action(SF-50) is the principal form which supplied information on personnel who were employed after the conversion to a mechanized system. Other documents which are required and processed to up-date the file are the purchase of saving bonds, change in withholding exemptions and change of name. The master file is up-dated bi-weekly by the processing of time and attendance reports.<sup>6</sup>

The master file is maintained in social security number sequence. By maintaining the file in social security sequence this minimizes the shifting of personnel from one place to another on the file due to the transfer within the Department of Agriculture. Therefore, personnel can be transferred within the Department without affecting their position on the master file. Input tapes are sorted according to social security number for processing against the master file.<sup>7</sup>

---

<sup>5</sup>Ibid., p.126

<sup>6</sup>Boris Robbins, Office of Management Improvement, United States Department of Agriculture, Washington, D.C., personal interview, October 2, 1969.

<sup>7</sup>U.S., Department of Agriculture, Management of Objectives with Dollars Through Employees, (Washington, D.C.: U.S. Government Printing Office, 1962), pp.1-7.



The time and attendance reports are submitted on a bi-weekly schedule and the special change form documents are submitted weekly. This procedure is followed to alleviate peak work loads and to distribute the work throughout the month.

From the master pay account, magnetic tapes are prepared for payrolls. These payroll tapes are mailed according to organizational code to one of the five disbursing offices for machine preparation of checks. These five regional disbursing officers distribute the checks to the individual or to the address designated by the individual. In addition to receiving a check bi-weekly, each individual is given a statement of earnings, leave and a time and attendance report for the next pay period.

Under the integrated system, data that is pertinent to one or more areas other than pay, are recorded on tape for processing against applicable master files. Data that is relevant only to pay is specially coded and the data is immediately separated to be utilized solely for payroll applications.<sup>8</sup>

<sup>8</sup>Ibid., pp.120-27.



## CHAPTER X

### PRODUCTS OF THE AGRICULTURE SYSTEM

#### Product for the Individual

Each employee of the Agriculture Department has a pay account in the master payroll file which is maintained at the Management Data Service Center. This file contains all pertinent data such as base pay, identification, premium pay by types, deductions, record of payments, taxes withheld and leave balance. A historical file is also maintained for audit and inquiry.

Each member is permitted to indicate where he desires his bi-weekly payroll check to be delivered. An employee may designate delivery to his home, office, bank or elsewhere. This service is provided by the Management Data Service Center in that the computer is programmed to include delivery information in the production of the payroll checks.<sup>1</sup>

Each individual is provided two other documents from the central site. These documents are as follows:

1. Earnings statement: Bi-weekly, each employee will receive an earnings statement with the following

---

<sup>1</sup>Boris Robbins, Office of Management Improvement,, United States Department of Agriculture, Washington, D.C., personal interview, October 2, 1969.





information: name, social security number, amount of base pay, premium pay by types, gross pay, deduction by types, net pay and leave balance.<sup>2</sup>

2. W-2 Withholding Tax Statement: Annually or upon separation, each employee is issued a completed W-2 form with the following information: name, social security number, total FICA wages paid, FICA tax withheld, total wages paid during the calendar year, federal income tax withheld, state and other tax withheld.<sup>3</sup>

### Products for Management

Output to management is prepared in various forms, such as punched cards, magnetic tape, listings and special printed forms. The products of the integrated pay system are many and varied. Each of the outputs are designed so as to be factual, comprehensive and timely.

Three of the outputs of the system are in the form of magnetic tape. Data required for their preparation is obtained from the master payroll file. The three magnetic outputs are as follows:

1. Tape-Pay Listing: This tape is prepared each pay period and includes the name, net salary and the distribution address.
2. Tape-Bond Listing: This tape is prepared each pay period with the following information: denomination, name and address of owner and co-owner, name of

---

<sup>3</sup>Ibid., p.154



beneficiary and effective date of bond.

3. Tape-FICA Listing: This tape is prepared quarterly and shows the name of each employee, the total wages subject to FICA, and the total amount of FICA taxes withheld.<sup>4</sup>

Other outputs of the payroll system are in various formats for use by management and other agencies. The frequency of preparation is varied according to managerial requirements and reporting. The nature of the report and the frequency required is as follows:

1. Pay Period

- a. SF-2812, Report of withholding and contributions, health benefits, group life insurance, and Civil Service Retirement.
- b. SF-1166, Voucher and schedule of payments.
- c. SF-2811, transmittal and summary report to carrier (Health Benefits).
- d. Accounting Station Posting Media Report
- e. Time and attendance reports (Prepunched).

2. Quarterly

- a. TD-941, Employer's Quarterly Federal Tax Return.
- b. Employer's quarterly state tax return.
- c. Payroll savings bond report.
- d. Report of Federal Employments and wages.

3. Annually

---

<sup>4</sup>Ibid., p.152



- a. SF-2807-2, Annual Summary Retirement Fund transactions.
  - b. W-3, Reconciliation of income tax withheld from wages.
  - c. United Givers' Fund information.
  - d. Employer's annual state tax return.
  - e. Geographic distribution of federal payrolls for the calendar year.
  - f. Leave and liberty report.
  - g. W-2 withholding tax statement (Also upon separation of an employee).
4. As Required
- a. SF-1150, Record of leave data transferred.
  - b. TD-941-C, Statement to correct information previously reported under FICA tax.
  - c. SF-2806, Individual Retirement record.
  - d. Supplemental listing of installations.<sup>5</sup>

<sup>5</sup>Ibid., pp.151-158.



CHAPTER XI  
BENEFITS AND LIMITATIONS OF THE  
AGRICULTURE SYSTEM

Benefits

The payroll accounting system is a part of a total management system for the Department of Agriculture. Information is centralized at one site and is utilized for personnel, payroll and budget reports. The system is designed so as to pay employees, maintain personnel records, maintain accounting records and report to management the accomplishment of objectives.<sup>1</sup>

The system was designed by personnel within the Department of Agriculture who knew what the regulations were, what the managerial needs were and what the system would have to accomplish. This was accomplished by utilizing the specialized talents of system designers, mathematicians, payroll personnel, accountants, and budgeting personnel who were familiar with the old system.<sup>2</sup>

It was determined that the total system could be

---

<sup>1</sup>U.S., Department of Agriculture, MODE, A New Approach to Public Management, (Washington, D.C.: U.S. Government Printing Office, September 1961), p.7.

<sup>2</sup>U.S., Department of Agriculture, Management of Objectives with Dollars through Employees, (Washington, D.C.: U.S. Government Printing Office, 1962), p.i.





implemented by utilizing the data processing equipment that was already owned by the Department of Agriculture. This represented a substantial savings in that the additional cost was only the increase in employees required to operate the equipment and the maintenance cost of the existing equipment.<sup>3</sup>

The cost of development of the total system was approximately one million dollars. However, this was offset by the savings resulting from the implementation of an integrated system. It was estimated that the annual cost of administrative support was reduced by one and a half million dollars. This represented an annual savings per employee of fifteen dollars.<sup>4</sup>

Through centralization of the payroll function, it was possible to eliminate eighty-six of the eighty-seven payroll office. As a result of this elimination of payroll offices, it reduced the number of payroll office reports by 17,000 annually.<sup>5</sup>

The programming of individual leave record information into the system eliminates the need for manual computation. It also eliminates the need for reconciliation of balance variances shown on the payroll records and the personnel records. At the end of each fiscal year, leave information

---

<sup>3</sup>U.S., Department of Agriculture, MODE, A New Approach to Public Management, (Washington, D.C.: U.S. Government Printing Office, September 1961), p.7.

<sup>4</sup>Ibid., p.33.

<sup>5</sup>Ibid., p.36.



in terms of dollars, is provided each accounting activity. Cost of leave remaining at the end of the fiscal year would be represented by accrued annual leave and unused compensatory time.<sup>6</sup>

The system provides the basis for accrual accounting as required by the Budget and Accounting Act of 1956. This is accomplished by reporting the amount of pay earned, even though not yet paid, to the employee, to the accounting activities on a bi-weekly basis, and annually.<sup>7</sup>

The payroll system is designed to provide current information for outside agency requests and payments required by law such as the internal revenue service and the social security administration. It is also capable of reporting information to the state governments such as state income taxes withheld and taxable wages earned.<sup>8</sup>

The primary source of input into the system is by means of a prepunched time and attendance report. This process facilitates the minimum amount of work for the field activities in that the only item of information to be completed by the time keeper is the time the individual actually worked or was on leave.<sup>9</sup>

---

<sup>6</sup>U.S., Department of Agriculture, Management of Objectives with Dollars through Employees, (Washington, D.C.: U.S., Government Printing Office, 1962), p.116.

<sup>7</sup>Ibid., p.158

<sup>8</sup>Ibid., p.156

<sup>9</sup>Ibid., p.113



The system is designed to report information to management in a comprehensive, factual and timely manner. This is reflected in the twenty-five different outputs of the payroll system.<sup>10</sup>

### Limitations

Perhaps the largest limitation of the system is the means of input. Utilizing punched cards as a means of input requires each activity to forward its source documents to the central site for transcription, coding, editing and punching information into the cards. This process represents a duplication of effort in that data that was previously typed, must be keypunched. The process time is also increased by this means of input, because of the time required to manually prepared the document, the mailing time to the central site, the coding, transcribing and editing at the central site.

The use of mail as a means of communication between the central site adds to the process time. However, it must be noted that this means of communication is less expensive than utilizing electronic means. Therefore, data contained in the system is as current as the mail service to the central site.

The service to the employee appears to be reduced by the integrated system. This is attributed to the fact that local payment capability is not available to the employees. All payments are computed at the central location and magnetic

---

<sup>10</sup>Ibid., p.151.



tape is sent to decentralized locations for preparation of U.S. Treasury checks. Therefore, if an employee has a pay problem, it must be referred to the Management Data Service Center for correction. In some instances, this could possibly cause undue hardship to an employee.

The storage of data for the system is contained on eighteen different master tapes. Storage of data on magnetic tape poses several problems, such as, storage, access time for required data and the lack of life storage capability. Therefore, a random access capability does not exist in the Agriculture payroll system.





## CHAPTER XII

### CONCLUSIONS

The basic question raised by this study is, what are the major similar and dissimilar characteristics of the Joint Uniform Military Pay System as proposed by the United States Marine Corps and the centralized payroll system of the Department of Agriculture. Each system was designed independent of one another and according to the needs of each agency. The Agriculture system was designed in 1961, and was implemented two years later. The Marine Corps System is being designed and developed in accordance with a Department of Defense Directive called the Joint Uniform Military Pay System. The implementation of the Marine Corps System will not be completed until July, 1971.

#### Similar Characteristics

It is interesting to note that there are certain characteristics that are common to both. These characteristics are as follows:

1. Statutory Requirements; The Budgeting and Accounting Act of 1956 required all federal agencies to convert



to an accrual accounting system. This requirement was applicable to both the Department of Agriculture and the United States Marine Corps. In designing each system, requirements had to be met in order to receive approval for the system from the Comptroller General. Procedures were also designed to make both systems compatible with the requirements of other agencies of government such as the Treasury Department, Internal Revenue Service and the Social Security Administration.

2. Decentralized Operations: Prior to the implementation of an integrated pay and personnel accounting system, each agency performed payroll and personnel accounting on a decentralized basis. Personnel and payroll accounting also were operated as two vertical isolated systems. Operations were basically performed manually, except in some instances where the installations had data processing equipment available.
3. Central Processing: Both systems are designed to utilize a large computer with business type programs at a centralized site for maintenance of pay accounts. Each employee or Marine has a master pay account at the central site which is up-date by data received from various installations of the respective agency.
4. Preparation of Checks: The primary means of payment is by U.S. Treasury Checks. Both systems are



designed so as to prepare checks at decentralized locations in order that the employee or Marine might receive his pay in a timely manner.

5. Integrated Pay and Personnel System: Both systems are integrated pay and personnel accounting systems. Input affecting pay can also be utilized for personnel accounting and vice versa. This eliminates the need for reconciliation of differences between two vertical isolated systems, such as pay and personnel.
6. Earnings Statements: Each system is designed so as to produce a monthly statement of leave and earnings for each individual.
7. Source Data: Under both systems, the source data is prepared at decentralized locations for submission to the central site. However, this does not mean that the documents, data, means of input, or communication method are the same for both systems.

The two agencies studied differ vastly in mission, objectives and requirements in that, one is concerned with the nation's agricultural problems, while the other is responsible for national defense. Even with this wide divergence in agency objectives, the similar characteristics mentioned above enucleate the common problems and solutions as experi-



enced by the two agencies in the process of implementing an accrual accounting system for pay and personnel. The similar system characteristics of both agencies also reflect their conversion from a decentralized, manual and non-integrated pay and personnel accounting operation to an automated, centralized and integrated pay and personnel accounting system. Some similar characteristics, such as method of payments and issuance of earning statements are attributed to requirements of other agencies of the government.

### Dissimilar Characteristics

There are several similar characteristics shared by both systems, however, it is apparent that several differences exist between the two. The dissimilar characteristics are as follows:

1. Pay Entitlements: There is a vast difference in the number of pay entitlements that can be earned by Marine compared to those of an Agriculture employee. This is further complicated by the fact that the military entitlements are divided into three categories: basic entitlements, incremental entitlements and special non-routine entitlements.
2. Mode of Input: The mode of input by the Agriculture Department is by means of punched cards at the centralized site. The Marine Corps system will utilize machine scannable forms at decentralized





locations. Optical character readers will be used to scan the special forms, thereby reducing the need to convert typewritten information into punched card format.

3. Communication: The Agriculture system uses mail as a means of communication between the various installations and the Management Data Service Center. The Marine Corps system will transmit data by electronic methods (AUTODIN).
4. Storage: Magnetic tape is the means of storage for the Agriculture System. The data for the Marine Corps Pay System will be stored on magnetic disk, which will permit a random access capability.
5. Cost: As a result of implementing an integrated pay and personnel system, the Agriculture Department was able to experience an annual estimated savings of one and a half million dollars. The proposed Marine Corps system will not be implemented at a savings. In all probability it will cost more to maintain the new system than the manual system.
6. Field Payment Capability: The Marine Corps System is designed to have a capability to make payments to the Marines at the local disbursing offices. These payments can be in the form of cash or check. The Agriculture system computes pay and directs check payments from the central site only.



7. Personal Financial Records in the Field: Personal financial records will be maintained in the field for all Marines. In case of declared emergencies, the local disbursing officers can manually maintain payroll accounting in the field. As a result of mechanizing pay in the Agriculture Department, the field payroll offices were discontinued and all payroll accounting is conducted from the central site.
8. Allotments of Pay: The Agriculture system provides the means whereby an employee can purchase savings bonds through a payroll savings plan. The Marine Corps System is designed so that a Marine can allot all or part of his pay and allowances by means of numerous and different types of allotments.

The dissimilar characteristics of the two systems are a true indication of the differences in the nature of the two agencies. Factors, such as more pay entitlements, field payment capability, personal financial records in the field, allotments of pay, and communication by electronic means indicate the greater flexibility and mobility on the part of the Marine Corps as compared to the Agriculture Department.

Difference in the mode of input can be attributed to the technological developments of the times in which the two



systems were implemented. Optical character readers were not sufficiently perfected or economically feasible at the time of implementation of the Agriculture System.

Difference in the means of storage can be attributed to both technological developments and cost considerations. The use of magnetic disks with random access capabilities, have become more widely used since the implementation of the Agriculture System. Perhaps the largest consideration was the ability of the Agriculture Department to implement its system on equipment that was already owned by the Department. The only additional cost therefore, was the increased number of employees to operated the computer and the additional maintenance costs.

From the development of this study, it is apparent that integration of pay and personnel accounting is a logical solution to achieving accrual accounting. In the Federal Agencies, pay and personnel accounting are interrelated functions that are inter-dependent of each other. By combining these two functions into a single process, it facilitates a more factual, accurate and timely means by which to generate data pertinent to the efficient and effective management of these functions. Without the advent of the computer the combining of these two functions into an integrated system would not have been possible. The application of computer technology in the pursuit of integration of pay and personnel accounting



in the Federal Agencies is limited only by the imagination and creativity of the designers of the system within the perimeters of the organizational objectives and requirements.





## SOURCES CONSULTED

### Books

- Awad, Elias M. Automatic Data Processing. Englewood Cliffs, N.J.: Prentice-Hall Inc., 1966.
- Boore, William F., and Murphy, R.Jerry. The Computer Sampler: Management Perspectives on the Computer. New York: McGraw-Hill, 1968.
- Dauten, Paul M., ed. Current Issues and Emerging Concepts In Management. Boston: Houghton Mifflin, 1962.
- Enke, Stephen, ed. Defense Management. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1967.
- Gregory, Robert H., and Van Horn, L.Richard. Automatic Data-Processing Systems Principles and Procedures. Belmont, California: Wadsworth Publishing C.,Inc., 1963.
- Hitch, Charles J. Decision Making for Defense. Los Angeles, California: University of California Press, 1965.
- Lazzaro, Victor, ed. Systems and Procedures. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1968.
- Lyden, Fremont J., and Miller, G.Ernest. Planning, Programming, Budgeting: A Systems Approach to Management. Chicago, Illinois: Markham Publishing Co., 1967.
- Novik, David, ed. Program Budgeting, Program Analysis, and the Federal Budget. Cambridge, Mass.: Harvard University Press, 1960.
- Schoderbek, Peter P. Management Systems. New York: John Wiley and Sons, Inc., 1967.



Weidenbaum, Murray L. Federal Budgeting, The Choice of Government Programs. Washington, D.C.: American Enterprise Institute for Public Policy Research, 1964.

### Government Documents

- U.S. Comptroller General. Follow-Up Review of Causes of Erroneous Payments of Military Pay and Allowances. Washington, D.C.: Government Printing Office, 1968.
- U.S. Comptroller General. Review of Causes of Over-Payments of Military Pay and Allowances, Department of the Defense. Washington, D.C.: Government Printing Office, 1963.
- U.S. Congress. The Budget and Accounting Procedures Act of 1950. Pub.L.784, 81st Cong., 2d sess., 1950.
- U.S. Congress. The Budget and Accounting Procedures Act of 1956. Pub. L. 863, 84th Cong., 2d sess., 1956.
- U.S. Congress. Pay and Allowances of the Uniformed Services. Pub.L. 87-649, 87th Cong., 1st sess., 1964.
- U.S. Department of Agriculture. Management of Objectives with Dollars Through Employees, Preliminary Report. Washington, D.C.: Government Printing Office, 1961.
- U.S. Department of Agriculture. Manpower Planning, Movement-Analysis-Management, Personnel policy and Systems Development Division, Office of Personnel. Washington, D.C.: Government Printing Office, 1968.
- U.S. Department of Agriculture. MODE; A New Approach to Public Management, Preliminary Report. Washington, D.C.: Government Printing Office, 1961.
- U.S. Department of Agriculture. Samples of Personnel, Payroll, Accounting, Internal Control, and Budget Reports. Washington, D.C.: Government Printing Office, 1967.
- U.S. Department of Defense. Budgeting and Accounting for the Cost of Military Personnel Services, Department of Defense Instruction 7220.15. June 1, 1966.
- U.S. Department of Defense. Development, Test and Implementation of the Joint Uniform Military Pay System, Draft. January 31, 1966.



- U.S. Department of Defense. Management of the Military Personnel, Marine Corps Appropriation. Washington, D.C., 1961.
- U.S. Department of Defense. Program for the Development, Test, Evaluation, and Installation of the Joint Uniform Military Pay System, Department of Defense Directive 7330.3, November 4, 1966.
- U.S. Department of Defense. Requirements for Development, Test, Evaluation, and Installation of the Joint Uniform Military Pay System, Department of Defense Instruction 7330.4, November 7, 1966.
- U.S. Department of Defense. Responsibilities for the Administration of Automatic Data Processing Equipment Programs, Department of Defense Directive 5100.40, September 28, 1963.
- U.S. Department of Defense. Selection and Acquisition of Automatic Data Processing Equipment (ADPE), Department of Defense Directive 4105.55, September 28, 1963.
- U.S. Department of the Navy, Office of the Comptroller. Criteria and Data Requirements for Reporting Pay and Allowances. Washington, D.C., 1967.

#### Professional Journals

- Cartee, J.W., Capt., SC, USN. "One Score and Five." The Armed Forces Comptroller, January, 1968, pp.10-12.
- Gartley, Clyde E., and Jacobs, S.Frank, Lt.Cdr., SC, USN. "A Mechanized Military Pay System." The Armed Forces Comptroller, January, 1968, pp.26-29.

#### Unpublished Materials

- Throckmorton, J.M. "Origin of JUMPS- Program Status Overview," presentation, Pentagon, Washington, D.C., June 19, 1969.
- U.S. Department of the Navy. United States Marine Corps. JUMPS Field Procedures Manual, proposed draft. December, 1969.



Wright, J.F. "Marine Corps Plan for Implementation of the Joint Uniform Military Pay System." Formal presentation: JUMPS Management Review, Pentagon, Washington, D.C., June 19, 1969.

### Interviews

Clark, S.T., Office of the Fiscal Director, Headquarters Marine Corps, Washington, D.C., personal interview, September 26, 1969.

Hendricks, D.C., Office of Disbursing Branch, Headquarters Marine Corps, Washington, D.C., personal interview, December 8, 1969.

Robbins, Boris, Department of Agriculture, Chief, Office of Management Improvement, Washington, D.C., personal interview, October 2, 1969.

Sharp, D.D., Capt. USMC, Assistant Special Projects Officer for the Joint Uniform Military Pay System of the United States Marine Corps, Washington, D.C., personal interview, November 7, 1969.

Thomas, D.J., Major, USMC, Office of Disbursing Branch, Headquarters Marine Corps, Washington, D.C., personal interview, December 8, 1969.

Throckmorton, J.M., Department of Defense, Special Projects Officer for Joint Uniform Military Pay System, Washington, D.C., personal interview, October 2, 1969.

Tracey, R.L., Assistant Project Officer JUMPS, Marine Corps Finance Center, Kansas City, Missouri, personal interview, December 8, 1969.

Turner, R.L., Lt.Col., USMC, Office of Disbursing Branch, Headquarters Marine Corps, Washington, D.C., personal interview, December 8, 1969.

Wyannt, N.E., Major, USMC, Special Projects Officer for the Joint Uniform Military Pay System of the United States Marine Corps, Kansas City, Missouri, personal interview, September 25, 1969.





Thesis  
S66745

118106

Speed

A comparison of the  
United States Marine  
Corps Joint Military  
Pay System to the  
United States Depart-  
ment of Agriculture  
centralized pay  
system.

APR 16 85

27295  
30276

Thesis  
S66745

118106

Speed

A comparison of the  
United States Marine  
Corps Joint Military  
Pay System to the  
United States Depart-  
ment of Agriculture  
centralized pay  
system.

thesSno 745

A comparison of the United States Marine



3 2768 002 01563 8

DUDLEY KNOX LIBRARY